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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/876,152

06/08/2001

Lawrence B. Wolff

Wolff

6718

23294

7590

08/11/2003

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EXAMINER

SUNG, CHRISTINE

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 08/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/876,152

Applicant(s)

WOLFF ET AL.

Examiner

Christine Sung

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspond nc addr ss --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 24 June 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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Response to Amendment

1. The amendment filed on June 24, 2003 has been entered.
2. The drawing corrections filed on June 24, 2003 have been accepted and entered.

Claim Objections

3. Claim 3 has objected to because of the following informalities: The claim states “ a sensor apparatus describe in claim 2” and therefore contains a grammatical error. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
6. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shivanadian (US Patent 6,222,187).

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Regarding claim 1, Shivanadan discloses a sensor apparatus comprising: a focusing objective lens (element 122) for receiving radiation from an object; a beamsplitter (element 108) for receiving the radiation and dividing the radiation into first and second components; a first focal plane for sensing radiation in the visible spectrum (element 112), and producing a first output signal (Claim 1, part e); a second focal plane array sensing radiation in the IR spectrum (element 110) and producing a second output signal (claim 1, part d); and a signal output related to the signal outputs of the first and second plane arrays (element 200 and column 3, lines 6-9). Although Shivandan does not specify the exact thermal IR range as claimed, he does not limit the apparatus to any particular spectrum of radiation. Rather, he discloses a device for providing a broad wavelength electromagnetic radiation imaging of a device, but preferring wavelengths in the IR and visible light spectra. He further discloses that modifications and variation can be made in the implementation of the apparatus without departing from the scope of the invention (column 5, line 50- column 6, line 3). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the thermal IR range of 3-15 microns, as it has been included in the acceptable range of implementation of the device disclosed by Shivandan.

Regarding claim 2, Shivanadan discloses that the signals from the optical sensor (element 200) may be amplified in order to manipulate the information to obtain the desired results. The only difference between the claimed invention and the reference is that the claimed invention uses an optical amplifier rather than an electronic amplifier. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the electronic amplifier because the optical amplifier not only amplifies the desired radiation, but also amplifies

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the undesired radiation. One of ordinary skill in the art could reduce the errors in the signals by employing an electronic amplifier after the signals have been detected.

Regarding claim 3 and 4, Shivanadan discloses the use of a display and the ability to manipulate the processing of the signals to produce a desired display (Column 5, lines 39-48).

Regarding claim 5, Shivanadan, discloses the claimed invention except for making the device compact. It would have been an obvious matter of design choice to make the device compact, since such a modification would have involved a mere change in the size of the components. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Regarding claim 5, Shivanadan discloses the claimed invention except for making the device hand held or portable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make it portable, since it has been held that making an old device portable or moveable without producing any new and unexpected result involves only routine skill in the art. *In re Lindberg*, 93 USPQ 23 (CCPA 1952).

Response to Arguments

7. Applicant's arguments filed June 4, 2023 have been fully considered but they are not persuasive.

Regarding applicants' arguments about the specific subspectrum IR range, see the above motivation for the rejection of claim 1.

Regarding applicants' arguments about the microscope having a "single focusing objective lens for receiving radiation from a scene," Shivanadan does disclose a single focusing objective lens (element 122). The applicant argue that there is a turret of lenses and thus not only



one objective lens, but only one lens is used at a time to focus the radiation. The other lenses are only used to increase the power of magnification. Therefore a single lens of the turret of lenses has the same function of receiving and focusing the radiation from the scene, as disclosed in the claimed invention.

The applicants state that the beamsplitter does not receive the radiation from the objective lens, but rather from the grating spectrometer (element 106). However, Shivandan discloses that the whole spectrometer (element 106) may be omitted and the light may be separated by spectrum using a beamsplitter (Column 4, lines 31-33). Therefore, the argument that the beamsplitter does not receive light from the objective lens is not persuasive.

No specific arguments have been made regarding dependent claims 2-5.

As such, the claims still stand rejected as shown in detail above.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Sung whose telephone number is 703-305-0382. The examiner can normally be reached on Monday- Friday 7-4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 703-308-4852. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-0956 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.


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August 5, 2003



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